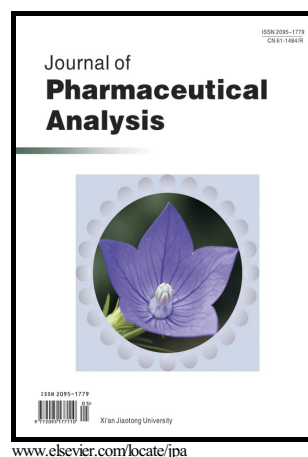


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A high throughput LC-MS/MS method for simultaneous quantitation of pioglitazone and telmisartan in rat plasma; development, validation and pharmacokinetic application

Pinaki Sengupta^{a*}, Bappaditya Chatterjee^a, Uttam Kumar Mandal^a, Bapi Gorain^b, Tapan Kumar Pal^c

^aDepartment of Pharm. Tech., Kulliyyah of Pharmacy, International Islamic University Malaysia, Malaysia.

^bLincoln University College, Malaysia.

^cBioequivalence Study Centre, Jadavpur University, Kolkata, India.

*Corresponding author. Email: psg725@gmail.com

Abstract

Management of cardiovascular risk factors in diabetes demands special attention due to their co-existence. Pioglitazone and telmisartan combination can be beneficial in effective control of cardiovascular complication in diabetes. In this research, we have developed and validated a high throughput LC-MS/MS method for simultaneous quantitation of pioglitazone and telmisartan in rat plasma. This developed method is more sensitive and able to quantitate the analytes in relatively shorter period of time compared to the previously reported methods for their individual quantification. Moreover, till date, there is no bioanalytical method available to simultaneously quantitate pioglitazone and telmisartan in a single run. The method has been validated according to the USFDA guidelines for bioanalytical method validation. A linear response was observed over the range of 0.005–10 µg/mL with satisfactory precision and accuracy. Accuracy at three quality control levels was within 94.27-106.10%. The precision value in intra and inter-day precision ranged from 2.32 to 10.14 and 5.02 to 8.12%, respectively. The method was reproducible and sensitive enough to quantitate pioglitazone and telmisartan in rat

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